

DO NOT CHANGE WITHOUT PERMISSION FROM MSHA

DRAWING N° 37556A

ELECTRICAL SYSTEM PERMISSIBILITY CHECKLIST

Listed below are the items and functions that must be maintained for the electrical system to be considered permissible. For a complete equipment permissibility evaluation, this checklist must be used in conjunction with a machine checklist and a power system checklist.

ALL INSPECTIONS AND TESTS SHALL BE PERFORMED IN FRESH AIR.

- A. **All electrical enclosures must meet the following provisions. (Refer to Table I.) These inspections must be performed weekly to comply with 30 CFR 751914(F)(I).**
1. All electrical enclosures are intact (not cracked or broken); the headlight lenses are not loose.
 2. All electrical enclosures have an MSHA plate attached that is clearly stamped with an MSHA certification (X/P) number.
 3. Use feeler gauges of the appropriate size to insure the clearances listed in Table I.
 4. All electrical components are securely mounted; headlights are guarded by position.
 5. Lockwashers or equivalent devices are provided for all bolts, screws, and studs that secure parts of the explosion-proof enclosures.
 6. None of the fasteners used for joints on the explosion-proof enclosures are used for attaching non-essential parts or for making electrical connections.
 7. All lead entrances (packing glands) are assembled so that a 1/8-inch minimum clearance remains between the packing nut and the stuffing box.
 8. All packing nuts and stuffing boxes are secured from loosening by a locking screw, wire, or other means. All unused lead entrances are closed with metal plugs that are secured in place by spot welding, brazing, or equivalent.

NEXT ASSEMBLY: **GA465-1**
REVISIONS:
(A) ECN 3319 1 1/15/96
(B) ECN 3369 09/22/97

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**ELECTRICAL SYSTEM
PERMISSIBILITY CHECKLIST
DIESEL/ELECTRIC SHUTTLE CAR**

DRAWING N° 37556A

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TABLE I

Item	Description	Intact (1)	Certification NO (2)	Max. Clearance (3)	Securely Mounted (4)	Lockwashers (5)	Joint Fasteners (6)	1/8" Packing Gland Clearance (7)	Packing Glands Secured from Loosening (8)
B	Generator	()	X/P-951 ()	Lid to Conduit Box.004" ()	()	()	()	()	()
C	Controller	()	X/P-2605-0 ()	Lid to Enclosure.004" ()	()	()	()	()	()
D	Circuit Breaker	()	X/P-2081-15 ()	Lid to Enclosure.004" ()	()	()	()	()	()
F	Tram Motor	()	X/P-1455-42 ()	Hand hold cover to Frame.004" ()	()	()	()	()	()
Alt. F1	Tram Motor	()	X/P-1455-13 ()	Hand hold cover to Frame.004" ()	()	()	()	()	()
G	Conveyor Motor	()	X/P-I 455-42 ()	Hand hold cover to Frame.004" ()	()	()	()	()	()
Alt. G1	Conveyor Motor	()	x/P-1455-13 ()	Hand hold cover to Frame.004" ()	()	()	()	()	()
H	Master Station	()	X/P-2393-0 ()	Lid to Enclosure.008" ()	()	()	()	()	()
J	Foot Switch	()	X/P-2398-1 ()	Lid to Enclosure.008" ()	()	()	()	()	()
K	Panic Switch	()	x/P-2405-0 ()	Lid to Enclosure.008" ()	()	()	()	()	()
L	Headlight	()	X/P-3221-0 ()	Lid to Enclosure.004" ()	()	()	()	()	()
M	Diagnostic P a n e l	()	X/P-I 275-2 ()	N/A	()	()	()	()	()
N	Voltmeter	()	X/P-1275-2 ()	N/A	()	()	()	()	()

*Optional

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- B. The following inspections are to be performed weekly; however, portions of cables or conduits enclosed in troughs or requiring the disassembly of guards need only to be inspected when the cable is repaired or replaced.
1. () All cables/conduits are clamped in place to prevent undue movement.
 2. () All cables are protected from mechanical damage by position, flame-resistant hose conduit, metal tubing, or troughs. Note: Flexible or threaded rigid metal conduit is not acceptable.
 3. () All cables are not subject to abrasion from sharp corners or edges.
 4. () All cables are isolated from hydraulic lines and components.
 5. () All cables are isolated from fuel lines.
 6. () All cables are flame-resistant if not enclosed in hose conduit. This is indicated by "MSHA" markings on the cable.
 7. () All hose conduit is securely clamped at both ends and MSHA markings are present and appear as *Flame-Resistant, US MSHA, US MESA, or USBM.*
- C. Whenever the controller is disassembled, the following items in the enclosure should be checked:
1. Circuit breaker ratings.
 - () Main breaker 2CB - 400 A max. instantaneous
 - () Control breaker 3CB - 10 A max.
 - () Lighting breaker 4CB - 10 A max.
 2. Overload relay settings. (Refer to Table II.)
 - () OL1
 - () OL2
 - () OL3

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TABLE II
MAXIMUM SETTINGS

Motor	Mfg./Type	Heater	Range	Max. Adj.	Ult. Trip
30 Hp Tram Motor	OL1, OL2 Westinghouse AA31XX	FH91	111-122	108	150 A
		FH92	123 - 129	97	
		FH93	130 - 133	92	
30 Hp Conveyor Motor	OL3 Westinghouse AA31XX	FH91	111 - 122	108	150A
		FH92	123 - 129	97	
		FH93	130 - 133	92	

3. Fuse ratings

- () FU1, FU2, Tram Motor N° 1; 200 A max., 300 V min.
- () FU3, FU4, Tram Motor N° 2; 200 A max., 300 V min.
- () FU5, FU6, Conveyor Motor; 200 A max., 300 V min.
- () FU7, FU8, FU9, Control Circuit; 15 A max., 300 V min.
- () FU10, FU11, FU12, FU13, Control Circuit; 2 A max., 50 V min.
- () FU14, FU15, Shunt Field; 15 A max., 300 V min.

4. () Controller lid switch operates freely. Ohmmeter verifies the function of lid switch.

D. Whenever the circuit breaker (Item D) is disassembled, the circuit breaker rating should be checked.

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1. () Generator Breaker 1 CB; 500 A max. instantaneous, 250 A max. thermal.

E. Whenever any electrical enclosure is disassembled, the following items should be checked:

1. () All lead entrances (packing glands) are assembled so that the cable jacket penetrates into the enclosure.
2. All joints forming the flame-arresting path are smooth and free from rust, corrosion or pitting.
3. () Use feeler gauge of the appropriate size to insure the clearances listed in Table I.

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